



International Society of Environmental Forensics

is Pleased to Announce
the Following Workshop

November 22-23, 2004

JW Marriott Hotel, Rio de Janeiro, Brazil

Environmental Forensics: **Petroleum Hydrocarbons, Analytical Techniques and Case Studies**

This interactive workshop is designed for environmental consultants, private, state and federal environmental attorneys, federal and state regulators and military personnel involved in site investigation and remediation projects who are interested in state-of-the-art information on the proper use and application of scientifically defensible environmental forensic techniques. The workshop will focus on the theory and use of environmental forensic methods in actual investigations, especially in cases that result in legal presentation. General categories of contaminants used to illustrate these techniques include petroleum hydrocarbons and oxygenates (MTBE and TBA), polyaromatic hydrocarbons, perchlorate and chlorinated solvents. Techniques presented via case studies that illustrate actual applications of these techniques include stable isotopes for chlorinated solvents, petroleum hydrocarbons and perchlorate, contaminant transport modeling in groundwater to identify release locations for multiple contaminant plumes, microbiological (DNA) techniques, forensic statistical analysis or environmental data and the proper and acceptable presentation of environmental data in legal settings.

Faculty presenting information on these various workshop subjects are nationally and internationally recognized scientific authorities in their respective disciplines and bring a wealth of experience on the use of forensic testing and analysis in real world settings. The format is designed for participants to enjoy a productive interchange with faculty members and each other during presentations, meals and breaks.

WORKSHOP PROGRAM DIRECTORS:

Robert Morrison, Ph.D., DPRA, Inc., San Marcos, CA

Maria de Fatima Guadalupe Meniconi, Senior Scientist, PETROBRAS S.A.,

Environmental Assessment & Monitoring Division - Research and Development Center, Rio de Janeiro, Brazil

Workshop information and on-line registration is available at

www.EnvironmentalForensics.org



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DAY ONE: November 22, 2004

8:30-9:00	Registration
9:00-9:15	Introduction Robert Morrison, Ph.D., <i>ISEF Education Coordinator, San Marcos, California, USA</i>
9:15-10:15	Overview of Environmental Laws in the United States and Europe Daniel M. "R.D." Sullivan, Esq., <i>Holland & Knight, Los Angeles, California, USA</i>
10:15-10:30	Break
10:30-12:00	Overview of Petroleum Hydrocarbon Biomarkers and their Application in Environmental Investigations Zhendi Wang, Ph. D., <i>Head, Oil Spill Research, Environment Canada, Ottawa, Ontario, Canada</i>
12:00-1:00	Lunch
1:00-1:15	Overview of Afternoon Session Zhendi Wang, Ph.D., <i>Moderator</i>
1:15-2:15	Use of Comprehensive Gas Chromatography in Environmental Investigations Christopher M. Reddy, Ph.D. <i>Department of Marine Chemistry and Geochemistry, Woods Hole Oceanographic Institution Woods Hole, Massachusetts, USA</i>
2:15-3:30	Spills Aftermath: Challenges to Short and Long Term Hydrocarbon Sources Determination Maria de Fatima Guadalupe Meniconi, <i>Senior Scientist, PETROBRAS S.A. Environmental Assessment & Monitoring Division - Research and Development Center, Rio de Janeiro, Brazil</i>
3:30-3:45	Break
3:45-5:00	Applications of ICP and Laser Ablation ICP Mass Spectrometry in Environmental Forensic: Case Studies Mohamad Ghazi, Ph.D., <i>ERS Consulting Inc., Atlanta, Georgia, USA</i>
5 :00	Adjourn

Support for this workshop has been provided by:

**Association for Environmental Health and Sciences (AEHS)
International Society of Environmental Forensics (ISEF)
PETROBRAS S.A.**



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DAY TWO: November 23, 2004

9:00-9:15	Welcome and Introduction to Morning Session Maria de Fatima Guadalupe Meniconi, <i>Moderator</i>
9:15-10:30	Applications of Microbiological Techniques for Contaminant Source and Age Dating Raul J. Cano, Ph.D., <i>Director-Unocal Chair for Environmental Studies, California Polytechnic State University, San Luis Obispo, California USA</i>
10:30-10:45	Break
10:45-12:00	Exposure of Marine Organisms to Polyaromatic Hydrocarbons (PAHs): Use of PAH Metabolites to Track the Impact of Oil Spills in Relation to their Toxic Impacts Helene Budzinski, Ph.D., <i>Université Bordeaux, Talence, France</i>
12:00-1:00	Lunch
1:00-1:15	Overview of Afternoon Session Christopher Reddy, Ph.D., <i>Moderator</i>
1:15-2:30	PAHs as a Forensic Source Identification Tool Robert Haddad, Ph.D., <i>Applied Geochemical Strategies, Inc., Arroyo, Grande, California, USA</i>
2:30-2:45	Break
2:45-4:00	Fingerprinting Detritivorous Fish Migrations as Pollutant Carriers Along the Río de la Plata-Paraná River Basin Juan C. Colombo, Ph.D., <i>Universidad Nacional de La Plata, Buenos Aires, Argentina</i>
4:00-5:00	Application of Isotopic Analysis in Environmental Forensic Investigations Julie K. Sueker, Ph.D., P.H., P.E., <i>Blasland, Bouck & Lee, Inc., Golden, Colorado USA</i>
5:00	Adjourn

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International Society of Environmental Forensics (ISEF)

PETROBRAS S.A.

JW Marriott Hotel Rio de Janeiro Information:

In the heart of Copacabana, overlooking the most beautiful beach, is The JW Marriott Hotel. Explore South America's premier International Gate Way City, Rio de Janeiro, named the friendliest city in the world. 245 guest rooms and suites, most with spectacular ocean view, combining exquisite style, sumptuous comfort and the latest in technology and convenience. The hotel has a fully equipped business center, a roof-top fitness facility and pool and enjoyable restaurants.

Relax and dine at the Terraneo Restaurant, open for breakfast, lunch and dinner, serving exciting Mediterranean fare or try the on-site Terraneo Sushi Bar, open for dinner.



Visit their website for a full description of hotel amenities:

<http://marriott.com/proprtyPage.mi?marshaCode=RIOMC> or www.marriottbrasil.com

JW Marriott Hotel Rio de Janeiro
Avenida Atlantica, 2600, Copacabana
Rio de Janeiro, 22041-001 Brazil
Phone: 55 21 2545-6574
Fax: 55 21 2545-6576
Email: ana.tre@marriotthotels.com

Room Rate:

Single: \$70.00, Double: \$77.00

- Participants are responsible for making their own room reservations. Please contact the hotel at the above phone or fax. Please do not use the on-line reservations system, as the special rate is not accessible.
- Cut off date for reservations: October 20, 2004 to receive the above rate.
- You must mention the group name (ISEF) to receive our special group rate listed above.
- Check in time 3PM, check out time 12PM

Travel Information:

Driving Directions From Airport :

Rio De Janeiro- Antonio Carlos Jobim International Airport – GIG

Hotel direction: 15 km N

Take Linha Vermelha, Centro de Copacabana, Perimetral then take Aterro do Flamengo, Praia de Botafogo, cross tunnel do Pasmado and tunnel novo take Princesa Isabel Avenue and turn right at Atlantica Avenue. Go straight till Posto Quatro.

Bus service fee: \$5.00 USD (one way)

Estimated taxi fare: \$49.00 USD (one way)



**International Society of
Environmental Forensics**



ISEF



ISEF

International Society of Environmental Forensics

The International Society of Environmental Forensics (ISEF) was created to facilitate communication and foster cooperation among professionals concerned with the evaluation of environmental contamination using environmental forensic techniques from a scientific or legal basis. The society is an international consortium of practitioners and faculty from a wide range of disciplines including: analytical chemistry, geochemistry, atmospheric chemistry, environmental fate assessment, environmental transport assessment and those involved with environmental litigation.

Environmental forensics includes investigating, interpreting and presenting evidence of source, fate, transport, composition, age, extent of or responsibility for contamination of all environmental media (i.e. air, soil, water or biota). The techniques are used to answer the following questions:

WHO CAUSED THE CONTAMINATION?

WHEN DID THE CONTAMINATION OCCUR?

HOW DID THE CONTAMINATION OCCUR?

WHO COULD BE THE POTENTIALLY RESPONSIBLE PARTIES?

HOW DO YOU ALLOCATE REMEDIATION COSTS?

WHAT CAN BE INTERPRETED FROM THE ANALYSES?

The goal of ISEF is to provide educational workshops and training on techniques that encompass the aspects of environmental forensics such as chemical fingerprinting, aerial photography, isotope age-dating of chemicals, geology and hydrogeology, field techniques and new equipment, laboratory methods and quality control, fate and transport modeling and environmental crime investigations. The society also serves to promote the publication, and dissemination of relevant technical material in the journal *Environmental Forensics*, the official journal of ISEF.

For more information about the society contact the Managing Director at:
International Society of Environmental Forensics

Tel: (860) 206-0614

Fax: (860) 206-0618

mdonohue@aehs.com

www.EnvironmentalForensics.org

The International Society of Environmental Forensics

WORKSHOP Registration Form • Rio de Janeiro, Brazil

On-line registration available at www.environmentalforensics.org

Name: Mr. Ms. Dr. _____

Company or Affiliation: _____

Address: _____

City: _____ State: _____ Zip: _____ Country: _____

Telephone: _____ Fax: _____ E-mail : _____

Please check this box if you would like to receive occasional email announcements about new workshops, conferences and publications

REGISTRATION FEES

General Registration\$200.00

REGISTRATION FEE INCLUDES:

- Course Enrollment for 2 days
- Course Workbook
- Morning and Afternoon Refreshments (2 days)
- Lunch (2 days)
- Welcome Reception
- 1-year Membership to the International Society of Environmental Forensics (ISEF), which includes a 1-year Subscription (electronic) to Environmental Forensics, an International Journal (2005 Calendar Year)

LATE REGISTRATION FEE Received after October 29, 2004ADD \$50.00

TOTAL WORKSHOP FEES\$ _____

Please indicate method of payment

Check (please make checks payable to ISEF) Purchase Order Number
P.O. number must be submitted with this form, fee is to be paid in full by October 29, 2004

Please Charge: MasterCard Visa Discover American Express

Account Number: _____ Expiration Date: _____

Cardholder Name: _____

Signature: _____

Encumbered purchase orders will be accepted from institutions and agencies for the purpose of pre-registration only. Full payment must be made by October 29, 2004. Non-compliance will result in a \$25.00 processing fee, in addition to a late fee for any resulting billings. Please fax or send completed form along with full payment **BY OCTOBER 29, 2004 TO AVOID LATE FEE to:**

ISEF, 150 Fearing Street, Suite 21, Amherst, MA 01002, USA

Tel: 413-549-5170, Fax: 413-549-0579

www.EnvironmentalForensics.org

Cancellation Policy: cancellations prior to October 29, 2004 will receive a refund, minus a \$100.00 cancellation fee. There will be no refunds after October 29, 2004.

For further information regarding registration, please contact Brenna Lockwood at the number(s) above or email brenna@aehs.com